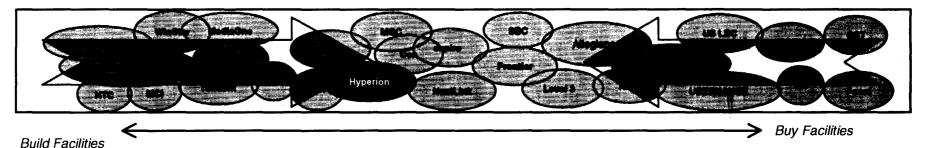
Hyperion Synopsis



Hyperion is a majority-owned subsidiary of Adelphia, the seventh largest CATV provider in the country. Launched as a traditional, fully facilities-based CLEC, Hyperion is an integrated local and long distance provider that targets retail business customers of all sizes and IXCs and other carriers with wholesale services.

Hyperion typically facilitates its expansion by partnering with local cable and utility companies and by reaching agreements to secure capacity. Specifically, details of some agreements by which Hyperion has acquired local and long-haul transport capacity are as follows:

Party	Capacity	Transaction	Details
Northeast Optic Network (NEON)	New England/lit fiber	\$20 million	4Q98
Metromedia Fiber Network	Metro networks/lit fiber	\$6.1 million	2Q98
	- New York		
	Long-haul/lit fiber		
	 New York-Washington, D.C 		
Qwest	Long-haul segments/dk. fiber	\$78 million	3Q98

Additionally, Hyperion has agreed with e.spire to acquire network fiber and construction services that will allow Hyperion to enter 14 markets in the eastern

Hyperion Synopsis (continued)

United States. The agreement gives Hyperion a long-term license to use approximately 576 route miles of e.spire's fiber to offer local voice, long distance, messaging, data, and Internet services in 14 new business markets. Hyperion also will acquire additional fiber miles in Fort Lauderdale, Florida, from e.spire. Hyperion's agreements to acquire capacity from other CLECs demonstrate the development of a wholesale market.

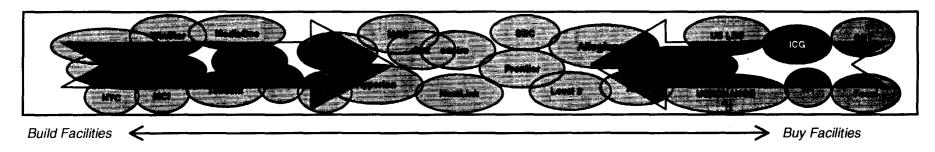
In addition to agreements with other CLECs, Hyperion has acquired capacity through acquisition. Specifically, Hyperion increased its ownership to 100% of New Jersey Fiber Technologies in the first quarter of 1998. As of March 31, 1999, Hyperion had approximately 6,108 local route miles and 283,432 local fiber miles. They had customers located in approximately 8,475 buildings of which 1,821 buildings were connected with company-owned fiber. It has collocated in 131 local exchange carriers LSOs. To date, 22 Lucent 5ESS swtiches or remote switching modules have been installed to provide local telephone service, with 8 additional regional super switches planned for operation during 1999.

In mid-1997, Hyperion activated its network in Lexington, Kentucky: an extensive fiber ring structure and a Lucent 5ESS switch. By partnering with TCI/Intermedia (for both leased facilities and construction activities), Hyperion completely bypasses GTE's local network in this market. Not only is GTE losing market share to Hyperion, but e.spire customers appear to be defecting to Hyperion after already having left GTE.

Hyperion Synopsis (continued)

	Lexi	ngton, KY	
Facilities	One class five switch Lucent 5ESS		over, webser der Per Benned St., zentem, dienet im - des der Bildermeter beson in beden
Targeting	 Small and medium-sized business larger customers 	es initially with eventual ex	position desired in the control of t
	 Business customers with need/der packages, including local and long Internet 	• •	
Strategy	 On-net customer acquisitions via internally constructed network supplemented with network capacity leased, constructed by, or acquire strategic partners such as cable TV companies, other utilities, and other facilities-based telecommunications providers Leveraging price sensitivity by undercutting GTE's business prices in Lexington market by 25-50% 		or acquired from s, and other
Service Offerings	apparation (1) (1) a said selection of the experimental and an exp	www.crishtelifeccott. her filled in more where act materials and materials absoluted halfest of a pure station from the state of the st	No.
	Local access (dial tone)	√	
	Switched services	V	
	Dedicated lines (data)	v	
	Special access services Internet	↓	

ICG Communications Synopsis



In 1991, ICG Communications began offering competitive access and private line services in Denver, Colorado. Now ICG operates competitive local networks in five regional clusters that cover major cities in California, Colorado, Ohio, Texas, and the southeast United States. By third quarter of 1998, ICG had approximately 4000 route miles of operational fiber and served 4900 buildings (646 on-net). At the same time, ICG had over 1.3 million voice grade equivalents available, serving over 290,000 access lines. While ICG utilizes some ILEC service resale, it is an extensive facilities-based carrier that typically deploys its own class five switches, fiber capacity, and SS7 Signal Transfer Points (STPs) in each market that it operates.

ICG also has acquired several smaller providers to expand its customer base and range of services. Specifically, during the first three quarters of 1998, ICG engaged in the following acquisitions:

Company Acquired	Business Line	Transaction Value	<u>Date</u>
ICG Ohio LINX	CLEC	\$9 million	3Q98
		(remaining 20% of equity)	
DataChoice Networks	Data services reseller	\$5.9 million	3Q98
NikoNET	Enhanced message	\$27 million	3Q98
	Services		Į.
NETCOM	ISP	\$283 million	1Q98
Communications Buying	CLEC	\$49.4 million	1Q98
Group			

ICG Communications Synopsis (continued)

As the table above indicates, the third quarter of 1998 culminated in several acquisitions. Notably, in the acquisition of DataChoice Network, ICG gained the customer base of a reseller for point-to-point data transmission services. ICG's acquisition of ChoiceCorn for \$55 million also enables ICG to expand its operations in the southwest United States. In January 1999, ICG sold the customer base of NETCOM to MindSpring for \$245 million after acquiring its network and Internet access business early in 1998. Selling the ISP customer base reflects ICG's strategy to target the ISP market as a wholesale provider of transport capacity. As such, MindSpring will continue to purchase network capacity and network management capabilities from ICG.

Although ICG has built or acquired businesses in many segments, its telecommunications services account for about 80% of the company's annual revenues. The company also provides, however, a wide range of network systems integration services as well as maritime and international satellite transmission services. ICG touts its ability to bundle services and offer integrated solutions as one of its primary sources of differentiation. Overall, ICG has deployed 38 switches in 27 markets.

For the markets profiled here, ICG's expansion into the Dallas-Fort Worth Metroplex began in January 1997 with the announcement of a strategic alliance with Dallas-based electric utility Central and South West Corporation (CSW). Together, the two companies formed a CLEC named ChoiceCom. ChoiceCom utilized CSW's expansive fiber network and Lucent 5ESS switches to provide facilities-based services in Austin, Corpus Christi, Dallas, Houston, and San Antonio. The arrangement was terminated, however, ending in late 1998. ICG retained ownership of the central offices and associated fiber, and CSW retained the venture's inter-city fiber routes. In downtown Dallas, ICG currently operates one Lucent 5ESS switch and 16 route miles of fiber. Although ICG plans to expand into Fort Worth later this year, it currently targets only small and medium-sized businesses in downtown Dallas. It markets itself as a low-cost, high-quality provider of integrated telecommunications solutions in the Metroplex.

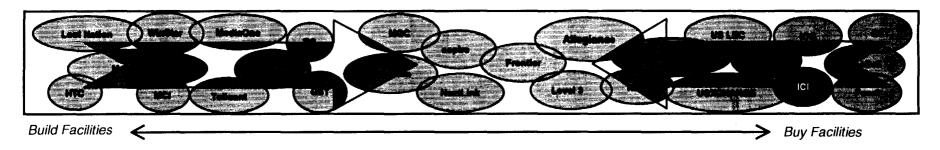
ICG Communications Synopsis (continued)

In Lexington, Kentucky, ICG operates one Lucent 5ESS switch. In Los Angeles, ICG has expanded from its original CAP business to full facilities-based provision. The company has constructed its own local network and currently operates five class five switches in this market. Finally, ICG leases lines from GTE, TCG, MCI, and PacBell in the greater Los Angeles area.

ICG Communications Synopsis (continued)

	Dallas-Fort Worth	Lexington	Los Angeles
Facilities	One class five switch	One class five switch	Four class five switches
	Lucent 5ESS	Lucent 5ESS	(Irvine, Lakewood, and 2 in
	Sonet ring (OC48)		LA)
	in downtown Dallas		Lucent 5ESS
Targeting	Small and medium-sized busing	nesses, defined as anything	g under 500 lines, needing integrated
	and bundled solutions		
	 Often serves customers that re 	equire multiple providers	
	 Wholesales own lines and res 	ells in small amounts	
	Offers local, long distance.	international calling, en	hanced services, high-speed data
	transmission, and wholesale (•	
Strategy	 Leases lines as a market entry 	v strategy and wholesales a	any excess capacity
J	_	= =	isting retail customer base, price
	competitiveness is used to red		• •
	•	• •	IGLWOIR
	Will gradually phase out resell	-	
	•	•	fies; decision based on a projected
	estimate of 40% monthly retur	n on i nvestment afte r five y	ears each
Service Offerings		Yes	No
	Local access (dial tone)	•	
	Switched services including long	distance ✓	
	Dedicated lines (data)	∀	
	Special access services Internet (wholesale ISP services of	ondu)	
	IIITOTITOT (MINIOSONO IOT SOLVICOS (л н у <u> </u>	

Intermedia Synopsis (ICI)



Intermedia Communications Incorporated (ICI) is a facilities-based carrier that offers an integrated service package for retail business, institutional, and government customers as well as wholesale provision to other carriers. ICI's retail packages include local, long-distance, and data products. Under a broad-based network strategy, ICI uses some resold services and ILEC UNE's to provide service. As economically justified, however, ICI migrates customers onto its own facilities. Under this migration strategy, ICI has maintained a high-level of revenue per dollar of gross plant: approximately \$0.63 for each dollar invested in 1997. ICI's own facilities are extensive. ICI has deployed well over 40,000 fiber miles nationally and usually operates its own class five switch in each of the markets that it operates. ICI also actively uses alliances, agreements, and acquisitions to expand its capacity.

ICI added several fiber routes in the latter half of 1998. Specifically, ICI completed deals with Metropolitan Fiber Network and Williams worth nearly a half-billion dollars for metropolitan and long-haul fiber routes. These agreements give ICI the opportunity to expand its fiber-based services in Boston, New York, Philadelphia, Chicago, and Washington, D.C., and on the West Coast. At the end of the first quarter, 1999, ICI was certified as a competitive local exchange carrier (CLEC) in 37 states and the District of Columbia. And as of March 31, 1999, ICI had 4,359 buildings connected, with 23 voice switches in operation and 376,742 access line equivalents.

Intermedia Synopsis (ICI) (continued)

ICI also has actively expanded its market reach and range of services through acquisitions. As shown in the table below, ICI has acquired a CLEC, IXC, ISP backbone provider, and shared tenant service provider in the last 24 months.

Company Acquired	Main Business	Details
National Telecommunications of Florida	Switch-based CLEC/IXC	Concluded 2Q98 \$151 million cash
Shared Technologies Fairchild	Shared Tenant Services	Concluded 1Q98 \$640 million stock/debt
LDS Communications	IXC	Concluded 1Q98 \$168 million stock/cash/debt
DIGEX	ISP backbone provider	Concluded 2Q97 \$150 million stock

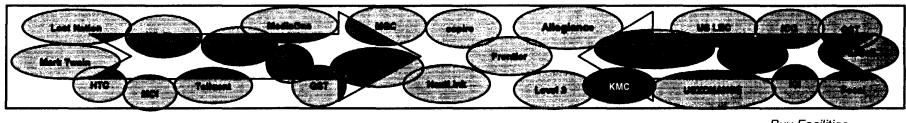
The DIGEX acquisition in particular enables ICI to add Internet solutions to its service portfolio and leverage cross-selling opportunities, especially to the business customers acquired with National Telecommunications of Florida.

Within the markets being profiled in this research, ICI has deployed facilities actively. In Dallas and Tampa, ICI operates four Nortel DMS500 switches in each market; this seemingly excessive count was confirmed by ICI representatives. Additionally, ICI has one DMS500 in the greater Los Angeles area. For transport, ICI has two OC48 SONET rings in Dallas that consist of 140 strand bi-directional fiber. ICI also has stated plans to install at least four additional OC-48 SONET rings to cover the suburban areas of the Metroplex. Details of ICI's fiber configuration in Tampa and Los Angeles are not known.

Intermedia Synopsis (ICI)(continued)

	Dallas-Fort Worth	Tampa	Los Angeles		
Facilities	Four class 4/5 switches - Nortel DMS500	Four class 4/5 switches - Nortel DMS500	One class 4/5 switch - Nortel DMS500		
	SONET Rings	SONET Ring	SONET Ring		
a atalonis da de monte de la companya de la company	Business, institutional/go	vernment customers as well as oth	talvadesperingspringspringsbrighten blank dag, suprem general, at de princeper of the company of the security of the company of the security of the company		
	 Estimates that 75% of its telecommunications pack 	customers have other carriers and ages"	prefer to "piece together their		
	Large buildings where connections can be controlled				
Strategy	Will utilize services or facilities of other CLECs				
	 Wholesales to non-faciliti 	es-based CLECs			
	 Utilizes the operating efficiency 	ciency of its ATM network to aggre	ssively price services		
	Will utilize resold service:	s and UNEs as market entry strateg	gies where economics dictate		
Service Offerings	and the state of t	unitadores a 10 a capacida constituina (a la datum destinum crossa, si anciente a da universe coletativi illim municip recursi delicitativi illim municipi recursi delicitativi illimi recursi delicitati illimi recursi delicitativi illimi recursi delicitativi i	Noo		
	Local access (dial tone)	✓			
	Switched services	✓			
	Dedicated lines (Data)	✓.			
	Internet				

KMC Telecom Synopsis



Build Facilities

Buy Facilities

Founded in 1995, New Jersey-based KMC Telecom is a privately held facilities-based carrier with eight networks that serve 23 cities throughout the southeast and mid-west United States. KMC plans to expand to a total of 40 cities by the end of 1999, primarily ones with populations of less than 750,000. KMC utilizes ILEC resold services initially as it builds its own infrastructure, which typically involves its own class five switches and metropolitan SONET rings. KMC did not purchase any UNEs from GTE as of December 31, 1998. Overall, KMC has deployed 25 switches throughout its market areas.

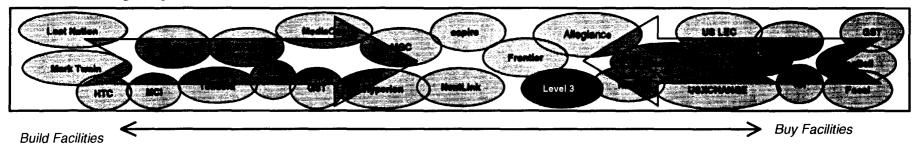
KMC offers a broad range of services including basic service, dedicated and high-capacity lines, high-speed broadband data and video transmission. While KMC focuses primarily on business, institutional, and government customers, it also will serve residential customers.

In the Ft. Wayne, Indiana, market profiled here, KMC operates one Lucent 5ESS-2000 VCDX switch and a SONET fiber optic self-healing ring that can provide capacity upwards of OC-48.

KMC Telecom Synopsis (continued)

	Fort	Wayne	
Facilities	One class five switch - Lucent 5ESS-2000 VCDX	omentore tractic and an extract transfer distribution of the first section of the section of the section of the	rik _{kan} mengani dadah dili kidaka dili kebada dila terbahkan dikan dila dalah dila dalah dila dalah dili kebada
	SONET fiber optic self-healing ring - Capacity to OC-48		
Targeting	Cities with populations of less than	750,000	na na matain a na matain na ma
	 Business, institutional, and government are not turned away. 	nent customers. Residen	tial customers
	Emphasis is on business customers who have a need for high-speed services		
	 Offers a suite of bundled services services of a particular to the needs of a particular t		n applications
Strategy	 Prefers to use own facilities due to the higher margins but will use resold services as an initial entry strategy with migration to own facilities. 		
	 Designs fiber cable routing based o government institutions that have a 		•
Service Offerings	der zur der Auftrechnen zur der Bereitstellen der der Bereits zu der Bereitstellen der der Bereitstellen der der Bereitstellen der Bereits	Ves i indiana de constituire de la company de la company de la constituire della con	No.
_	Local access (dial tone)	✓	
	Switched services	✓	
	Dedicated lines (data)	✓	
	Special access services	√	
eri, paste erandanskilderin, indigering in der der einstelle der der er er er einstelle der er er er er er er		addinas di himanga, di qaaddaa ka waddada mareed a dha baxaa dha dha dha dha dha dha dha dha dha d	وماينة والارور وكراوي فلف الأماقة والأنشاطة والانتخاص الانتخاصة والماسانية والمدارد والمردور والمارات

Level 3 Synopsis



Level 3 is a facilities-based carrier that employs a high-speed network based upon an Internet Protocol (IP) architecture. Level 3 was founded by former executives of MFS Communications and is funded in part by a \$3 billion investment from Peter Kiewit & Sons, a large international construction company. The company seeks to capitalize on the efficiencies of packet switching. Level 3 also is constructing its own fiber network from scratch, utilizing multiple conduits in order to deploy future generations of optical networking equipment in a cost effective manner, thereby further minimizing any reliance on ILEC facilities.

Level 3's network does not have any circuit switches due to costly support structures required around each circuit switch and the superior operating efficiencies of packet switching. The company and others in the industry are working to develop a soft-switch technology that will allow seamless integration of router-based IP networks with the circuit switched based PSTN. Level 3 expects that this will enable its customers to benefit from the lower cost of IP network services, including voice and fax, without having to modify existing telephone and fax equipment.

Level 3 Synopsis (continued)

Level 3 has numerous Enterprise EDS 4500 digital switches scattered across the United States, including two in the GTE serving areas of Dallas/Fort Worth and Los Angeles. The company plans to construct city networks within 50 of the largest cities in North America, which will then be connected to its fiber facilities linking all the cities together in a national network. Over the next three to five years, Level 3 expects its network to encompass:

- An inter-city network covering nearly 16,000 miles in North America
- Backbone facilities in 40 North American markets
- Leased backbone facilities in 10 additional North American markets
- An inter-city network covering approximately 3,500 miles across Europe including transoceanic capacity

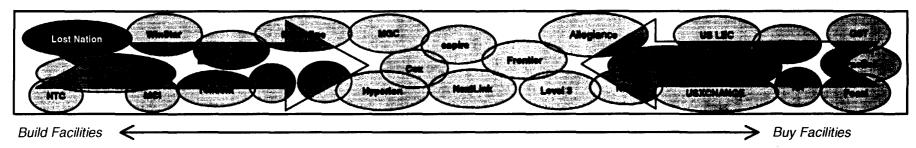
In order to compete more aggressively, Level 3 acquired XCOM Technologies in 1998 to gain access to technology that provides an interface of IP technology to the public switched network. This move demonstrates that competitive entrants are able to either develop or acquire the capability necessary to ensure the success of their facilities-based market entry strategy.

To offset the cost of facilities-based deployment, Level 3 and InterNext, LLC, a subsidiary of NextLink Communications, Inc., entered into an agreement whereby InterNext acquired the right to use 24 fibers and certain associated facilities installed along the entire route of Level 3's North American inter-city network. Additionally, Level 3 recently entered into a 20-year agreement with Time Warner Telecom to provide access to Level 3's conduits in the Dallas area. These arrangements underscore the ability of the marketplace to deploy infrastructure cost effectively where required without the need to utilize the network of the ILECs.

Level 3 Synopsis (continued)

	Dallas-Fort Worth	Los Angeles	
Facilities	One class five switch Enterprise EDS 4500 digital switch	One class five switch Enterprise EDS 45	600 digital switch
	SONET Ring	SONET Ring	
Targeting	 National strategy of large business customers with needs for advanced high speed capabilities at 1.54 Megabits per second or higher Offers an integrated package of voice and data services aggressively priced due to the efficiencies of its packet switching network Offers a suite of bundled services including long distance, local wireline and many data/internet services 		essively priced
Strategy	 Utilizes IP networking to gain efficient Focus on large business customers to offset cost of infrastructure build-out Emphasizes the cutting edge nature 	out also wholesales to ot	
Service Offerings	ataun en anteren a men pelle consideradione de la limbi administration di distribute materialità de la distribute di distribute de la consideration de la consideratio	atelia kiri dapangana paratrapantahan product radio da in radio da interpretamental panina Y 08	entre a mentre del distante del describito del
.	Local access (dial tone)	✓	
	Switched services including long distance	• ✓	
	Dedicated lines (data)	✓	
	Special access services	✓	
	Internet	✓	

Lost Nation-Elwood Telephone Synopsis



Lost Nation-Elwood Telephone (Lost Nation) is a small rural cooperative in eastern lowa that successfully duplicated the wireline distribution network in GTE's Oxford Junction exchange in 1997. The Oxford Junction exchange is contiguous with Lost Nation's territory, so the cooperative has been able to bypass GTE's network completely by hauling traffic and using its own switching. Lost Nation possesses one Northern Telecom DMS10 digital switch and one remote, apparently with sufficient excess capacity to accommodate nearly all of GTE's former customers in Oxford Junction.

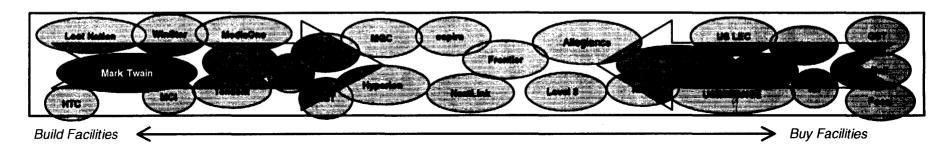
Lost Nation offers local (basic and enhanced) service, CATV and Internet access with optional bundling. The pricing for most services undercuts GTE rates by approximately 20-25%, or more, and installation charges often are waived. Through aggressive pursuit of *all* residential and business GTE customers via door-to-door solicitation and extensive public relations activities, Lost Nation won 85% of GTE's customers in the exchange over a two-month period, December 1997 to January 1998. Today only 30 GTE customers remain in an exchange that had nearly 400 GTE customers in December 1997.

GTE has estimated that just under \$500,000 in fixed investments remain in Oxford Junction, although less than 10% of the original customer base remains with GTE. By contrast, Lost Nation has invested approximately \$850,000 to overbuild the exchange to provide telephone and cable services.

Lost Nation-Elwood Synopsis (continued)

	Oxford Junc	tion	
Facilities	One class five switch	не онивенда, стали от Искорилийн облософияланых инвост Инсентуу ос полосо осоно "неибилгих	incolonistationimate Cohant ripide. Tenerical radionals <u>prom</u> er <u>veli (in inteliment</u>)
	 One Northern Telecom DMS10 (Digital 	ıl)	
	One Northern Telecom Remote Switching Ce	enter	
	Complete overbuild of GTE's distribution net	work	
Targeting		kaikistokkonsiis, a kokkoloroikoori oleen oleen araamaraksaallaanen on ilijona olee suuduktivätioväksyä.	1880-r Algidar Albelon, 1841-1860 segari k _a laya janggaljanan salah dala _{na} pepundikan malalah sebasah
	 All residential and business customers of exchange. 	GTE in the Oxford	Junction
Strategy	Lost Nation offers local (basic and enhanced) service, CATV, and Internet access with optional bundling.		, and Internet
	 Leverage local presence/"personal touch" product offerings. 		tically integrate
. Marine and the second of the	Price below GTE by 20% to 25% on average.	190. Tanti ravia dilitari ne tan ngandosto anisi stra no anisi ano anista.	en ekkennelen de nyanin, maj nantakalalanak yang kingga institut kek
Service Offerings		Yes	No
	Local access (dial tone)	✓	
	Switched services	✓	
	Dedicated lines (data)	✓	
	Special services (HiCAP, ATM, ADSL)		✓
	Internet	✓	
	CATV	✓	

Mark Twain Rural Telephone Company/Mark Twain Communications Company Synopsis



Mark Twain is a small but aggressive rural cooperative in Missouri. In 1996, Mark Twain had net operating revenues of \$3.9 million with \$17.2 million of telephone plant in service and about 4,000 subscribers in the four exchanges in its franchise territory. Mark Twain has built over GTE's local distribution networks in the Ewing, Lewistown and LaBelle exchanges of northeast Missouri and procures no network elements from GTE.

Mark Twain targets all residential and business customers in LaBelle, Lewistown and Ewing. As with many CLECs affiliated with a rural cooperative, Mark Twain combines an all digital network, internet and long-distance services with their local service offerings. By leveraging its local presence and offering a lower price than GTE, Mark Twain Communications has significantly eroded GTE's customer base in these exchanges. Specifically, GTE had about 1,500 subscribers in Ewing, Lewistown and LaBelle as of August 1998. By February 1999, Mark Twain had won 30% to 50% of the customers in each exchange with business losses outpacing residential losses.

Mark Twain Synopsis (continued)

According to local GTE management, Mark Twain has buried plant within the city limits "however and wherever they could." The company has installed remote switching off of its Hurdland host in each GTE exchange. Further, it has installed fiber from Hurdland through LaBelle, Lewistown, Ewing and Durham (another Mark Twain exchange).

Mark Twain is one of nine participants in a consortium of independent telephone companies—the Rural Area Information Network (RAIN)--that offers local Internet access to 124 rural communities in 43 counties and an estimated 411,736 residents of Missouri. RAIN is described as a success story on the web site of the Rural Utilities Service (RUS). Mark Twain also recently requested approval from the Missouri Public Service Commission to borrow upwards of \$32,976,550 from the Rural Utilities Service and the Rural Telephone Bank (Case No. TF-99-200), funding not available to GTE for serving the same geographic areas.

Mark Twain Synopsis (continued)

Facilities

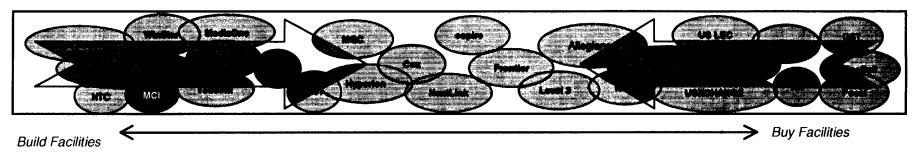
entra mountours	Extensive duplication of GTE's distribution network in LaBelle, Lewistown,
	and Ewing. Mark Twain Communications operates as a CLEC with a
	Northern Telecom DMS10 remote in each of the three exchanges. Switching
	is procured from Mark Twain Rural Telephone Company.
es also a con-	All GTE customers in the Ewing, LaBelle, and Lewistown exchanges.

LaBelle, Lewistown, and Ewing, Missouri

	and Ewing. Mark Twain Communicat Northern Telecom DMS10 remote in a is procured from Mark Twain Rural Te	each of the three excha	
Targeting	 All GTE customers in the Ewing, LaBelle, and Lewistown exchanges. Several other GTE exchanges are in close proximity and may be future targets. 		
Strategy	 Vertically integrated product offerings Internet Leverage local presence 	, including local, long-d	istance, and
	Price below GTE		
Service Offerings	Local access (dial tone)	Yes	to account units at the oracle discounts of the control of the con
	Switched services Dedicated lines (data)	✓	
	Special services (HiCAP, ATM, ADSL) Internet	✓	✓

CATV

MCI WorldCom Synopsis



MCI WorldCom serves local customers primarily through service resale and total facilities bypass of GTE's facilities. As of December 31, 1998, MCI purchased no unbundled network element (UNE) loops from GTE. MCI also purchased no local, tandem or inter-switch transport as UNEs. In Dallas-Fort Worth, Los Angeles and Tampa, MCI WorldCom possesses class five switches in each market that serve redundant geographic areas with those of GTE. MCI also has extensive transport facilities in these markets, as detailed below. Finally, MCI WorldCom's local offer encompasses operator and directory services, apparently self-provisioned by MCI.

MCI WorldCom began offering local services in the Metroplex during the fourth quarter of 1996, but it previously had offered access and data services. The company covers the vast majority of suburbs to Dallas, including Addison and Irving on a facilities-basis. Consistent with its national strategy, MCI WorldCom in the Dallas-Fort Worth Metroplex primarily targets a suite of services towards large business customers. MCI WorldCom's local service offering, however, includes provision of emergency 911, a directory listing, operator service and equal access. In addition to local service, MCI WorldCom offers Internet dial and access, private line (domestic and international), frame relay, remote LAN dial, ATM, ISDN and managed services. Overall, MCI WorldCom is estimated to serve over 250 buildings on-net in the Metroplex.

MCI WorldCom Synopsis (continued)

As a facilities-based carrier, MCI WorldCom is known to operate class five switches (DMS10s, DMS100, DMS500), and over 700 route miles of fiber in the Dallas-Fort Worth Metroplex. MCI WorldCom's DMS500 is capable of connecting up to 100,000 trunks. The DMS100 switch, 25 miles of fiber, and 30 lit buildings belonged to MCI prior to its merger with WorldCom; this switch is capable of being converted to a Nortel DMS-500 switching system if such a conversion becomes economical. The fiber backbone transmits voice and data at OC-48, although several fiber spurs run more slowly; most fiber from the former MCI Dallas network supports DS-1 or DS-3 interfaces, but several from the former WorldCom network run at OC-3 or OC-12.

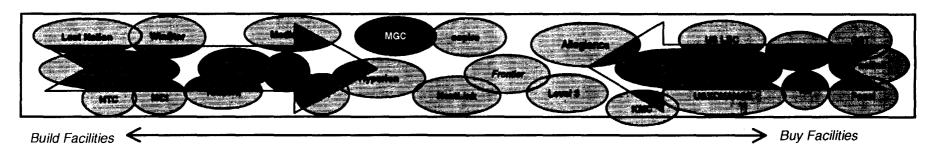
In Tampa and Los Angeles, MCI WorldCom has been operating for over one and a half years. According to MCI WorldCom representatives, the company has a SONET ring and two class five switches serving the Tampa area and a similar but unspecified network architecture with two class five switches in Los Angeles. MCI WorldCom representatives stated that switched analog services currently are offered only via leased lines (resold) from GTE (Tampa and Los Angeles) and PacBell (Los Angeles), but the company plans to grow its on-net provision of customers: "We are getting away from that and shifting everything to our own lines."

MCI/WorldCom claims that it has been successful in targeting the local branches of its national accounts to use its digital local loop service, and it plans aggressively to target a wider range of local businesses as it completes its network build-out. MCI/WorldCom states that it does not actively breakdown the percentage of its traffic is voice or data because "it does not matter on a digital system. We just give the customer a digital line, and if the customer installs a PBX, then the traffic is voice. If the customer installs a router for the line, then it is for data." MCI/WorldCom estimates that overall, however, the traffic on these digital lines approximately is predominantly voice (70% in Tampa, 60% in Los Angeles).

MCI WorldCom Synopsis (continued)

	Dallas-Fort Worth	Tampa	Los Angeles	
Facilities	Four class five switches - One DMS500 - One DMS100 - Two DMS10S	One class five switch – DMS100	Three class f - One DM - One DM - One Luc	S100
	SONET ring covering Dallas-Fort Worth Metroplex	SONET ring covering Clearwater, Hudson, Plant City, St. Peters- burg, Tampa, and Tarpon Springs	SONET ring Anaheim, Irvi Los Angeles	•
Targeting	 Angeles area branch Preferred minimal tar Comfortable with low 		tional accounts eal target of 50 LEC for local a	s. or more lines.
Strategy	some ad-hoc activity,	sale strategy was reveale, mainly in the Los Angelo dled services, including lo s.	es area.	
Service Offerings	Local access (dial tone) Switched services Dedicated lines (data) Special access services Internet	nak gilak kaca Majajaja ana dalah di Indonesia oleh nga gaja gaja yang sang Stad Ali Paja Kangada sida da hawa di	Yes ✓ ✓	niversona, respective to the second section of the section of the second section of the second section of the second section of the second section of the section

MGC Communications Synopsis



MGC Communications is a facilities-based carrier that provides local and long-distance services primarily to residential and small business customers. MGC purchases and deploys its own switching and transmission equipment, but it often uses ILEC unbundled loops. MGC also leases interoffice fiber facilities from the ILECs as well as other carriers. The company currently operates switches in Las Vegas, Atlanta, Chicago, Los Angeles, San Diego, and parts of Florida. As of the end of 1998, MGC had seven switches operational and 207 collocation sites. Two of the seven switches are located within proximity of GTE's southern California markets profiled here.

MGC's funding for facilities has come from cash on hand from previous private placements of debt and equity. For example, the company recently completed an Initial Public Offering of its common stock that raised approximately \$55 million. Furthermore, the company also is in the process of evaluating financing proposals from vendors and equipment lease financing companies. If financing is available on acceptable terms, MGC has indicated that it may accelerate its expansion plans.

In April 1999, MGC announced plans to utilize proceeds from the placement of \$47.5 million in convertible stock to roll out digital subscriber line (DSL) high-speed services. After the announcement, the market price of the company's shares rose from \$9 per share to over \$21 per share within one week, reflecting the potential that the market places on opportunities available to CLECs.

MGC Communications Synopsis (continued)

Los Angeles

Facilities	Two class five switches Northern Telecom DMS 10S digital switches		
Targeting	Focuses on small business and residential customers		
	 Offers a suite of bundled services, including long distance, local wireline, and many data/Internet services 		
	 Recently announced a new business strate services 	gy of offering DSI	_ high-speed
Strategy	Deploys its own switching		
	Employs a "smart build" strategy that utilizes other carriers' interoffice		
	facilities to link to its own switches		
	Utilizes collocation arrangements to access ILEC unbundled loops		
Service Offerings	Die Blann der nach den gelagt vor der den de genande bestätenhalte der die erhol nach der Abentandelse bezindelse, word wedere termbere bestamme vor bestamme der der der der der der der der der de	Yes	No
	Local access (dial tone)	✓	
	Switched services including long distance	✓	
	Dedicated lines (data)	✓	
	Special access services	✓	
	Internet	✓	